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09/786,855	03/09/2001	Shoichiro Matsuo	113197-006	7937

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EXAMINER
MOONEY, MICHAEL P

ART UNIT	PAPER NUMBER
2877	

DATE MAILED: 08/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/786,855	Applicant(s) MATSUO ET AL.	
	Examiner Michael P. Mooney	Art Unit 2877	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13,16,17 and 20* is/are rejected.

7)☐ Claim(s) *14,15,18,19 and 21* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *3,4,6,8* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Kato et al. (6181858).

Kato et al. teaches a dispersion shifted optical fiber including a core and cladding provided at an outer periphery of the core (fig. 12), and having a refractive index profile in which

the core is provided with a central core portion (CCP) and a peripheral core portion (PCP) having a higher refractive index than the CCP provided at an outer periphery of the CCP (fig. 12), and

the cladding has a lower refractive index than the PCP (fig. 12), wherein,

in a used wavelength band selected from 1490 to 1625 nm (col. 11 lines 32-60), the dispersion shifted optical fiber has an effective core area of 45 to 130 square micrometers (col. 11 lines 32-60), a chromatic dispersion value of –8 to +8 ps/km/nm (col. 11 lines 32-60), a dispersion slope of 0.12 ps/km/(square nm) or less (col. 11 lines 32-60), a bending loss of 100 dB/m or less (col. 6, lines 42-46; col.18 lines 40-50), and a cutoff wavelength that provides essentially single mode operation (e.g., col. 1 lines 5-10).

Thus claim 1 is met.

Furthermore, Kato et al. teaches each and every element of claim 2 (e.g., col. 11 lines 30-60) including element a (col. 11 lines 40-50), element b (col. 11 lines 45-51), element c (col. 11 lines 40-51), element d (cols. 11-12).

The aforementioned reasons/references also meet each and every element of claims 3-4, 6. Thus claims 3-4, 6 are met.

The aforementioned reasons/references also meet each and every element of claim 5 with the additional cite of col. 18 lines 35-37. Thus claim 5 is met.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7 are rejected under 35 U.S.C. 102b as being anticipated by JP 10-246830.

JP 10-246830, at, e.g., figure 1 and the table on p. 7, teaches each and every element of claims 1-7. Thus claims 1-7 are met.

Claims 1, 10 are rejected under 35 U.S.C. 102b as being anticipated by Hirano et al. (Proceedings of general meeting in 1998 of The Institute of Electronics, 6 March 1998 page 223).

Hirano et al. teaches, e.g., in the figures/ table on page 223, each and every element of claims 1 and 10. Thus claims 1, 10 are met.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-4, 8-9, 13, 16-17, 20 are rejected under 35 U.S.C. 103a as being unpatentable over "Translation of JP11-167038", which is herein referred to as "Sasaoka et al."

Sasaoka et al. teaches a dispersion shifted optical fiber including a core and cladding provided at an outer periphery of the core (fig. 1), and having a refractive index profile in which

the core is provided with a central core portion (CCP) and a peripheral core portion (PCP) having a higher refractive index than the CCP provided at an outer periphery of the CCP, and

the cladding has a lower refractive index than the PCP, wherein,

in a used wavelength band selected from 1490 to 1625 nm (page 11/23 paragraph 0014 lines 1-2), the dispersion shifted optical fiber has an effective core area of 45 to 130 square micrometers (page 11/23 paragraph 0014 lines 6-7), a chromatic dispersion value of –8 to +8 ps/km/nm (page 11/23 paragraph 0014 line 4) , a dispersion slope of 0.12 ps/km/(square nm) or less (page 11/23 paragraph 0014 line 5), a bending loss of 100 dB/m or less (pages 12/23 to 13/23 paragraph 0016 lines 8-11; and/or page 12/23 paragraph 0015 lines 8-9).

Furthermore, although Sasaoka et al. does not expressly state, "...a cutoff wavelength that provides essentially single mode operation", this would have been

obvious because it is notoriously well known (NWK) to design dispersion shifted/adjusted optical fiber with a cutoff wavelength that provides essentially single mode conversion.

Thus claim 1 is rejected.

Sasaoka et al. contains all the parameters necessary to demonstrate that Sasaoka et al. teaches each and every element that is stated in claim 2 at page 11/23. The rudimentary calculations verify this to be true. Thus claim 2 is rejected.

The above reasons and/or references also teach also cover each and every element stated in claims 3-4, 8-9. Thus claims 3-4, 8-9 are rejected.

The above reasons and/or references in addition to, e.g., Sasaoka et al. fig. 2,and/or figs. 3-4 also cover each and every element stated in claims 13, 16-17, 20. Thus claims 13, 16-17, 20 are rejected.

Claims 10-12 are rejected under 35 U.S.C. 103a as being unpatentable over Kato et al. (6181858).

Kato et al. teaches a dispersion shifted optical fiber including a core and cladding provided at an outer periphery of the core (fig. 12), and having a refractive index profile in which

the core is provided with a central core portion (CCP) and a peripheral core portion (PCP) having a higher refractive index than the CCP provided at an outer periphery of the CCP (fig. 12), and

the cladding has a lower refractive index than the PCP (fig. 12), wherein,

in a used wavelength band selected from 1490 to 1625 nm (col. 11 lines 32-60), the dispersion shifted optical fiber has an effective core area of 45 to 130 square micrometers (col. 11 lines 32-60), a chromatic dispersion value of –8 to +8 ps/km/nm (col. 11 lines 32-60), a dispersion slope of 0.12 ps/km/(square nm) or less (col. 11 lines 32-60), a bending loss of 100 dB/m or less (col. 6, lines 42-46; col.18 lines 40-50), and a cutoff wavelength that provides essentially single mode operation (e.g., col. 1 lines 5-10).

In addition, see figs. 17, 22; col. 6 lines 40-46; col. 8 line 60 to col. 9 line 5; col. 11 line 30 to col. 12 line 55

Furthermore, Kato et al. teaches each and every element of claim 10 with the exception of expressly stating "45 to 70" square micrometers. This, however, is rendered obvious under "Obviousness of Ranges" of which the MPEP states:

2144.05 Obviousness of Ranges

I. OVERLAP OF RANGES

In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Geisler, 116 F.3d 1465, 1469-71, 43 USPQ2d 1362, 1365-66 (Fed. Cir. 1997) (Claim reciting thickness of a protective layer as falling within a range of "50 to 100 Angstroms" considered prima facie obvious in view of prior art reference teaching that "for suitable protection, the thickness of the protective layer should be not less than about 10 nm [i.e., 100 Angstroms]." The court stated that "by stating that suitable protection' is provided if the protective layer is about' 100

Angstroms thick, [the prior art reference] directly teaches the use of a thickness within applicant's] claimed range."). Similarly, a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that on skilled in the art would have expected them to have the same properties. Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (Court held as proper a rejection of a claim directed to an alloy of "having 0.8% nickel, 0.3% molybdenum, up to 0.1% iron, balance titanium" as obvious over a reference disclosing alloys of 0.75% nickel, 0.25% molybdenum, balance titanium and 0.94% nickel, 0.31% molybdenum, balance titanium.).

Thus, under Obviousness of Ranges, Kato et al. col. 2 lines 53-58 renders the said range as obvious.

Thus claim 10 is rejected.

Kato et al. teaches the additional limitations of claims 11, 12 (see aforementioned references). Thus claims 11-12 are rejected.

Allowable Subject Matter

Claims 14-15, 18-19, 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Mooney whose telephone number is 703-308-6125. The examiner can normally be reached during weekdays, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 703-308-4881. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7721 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956. An alternative useful number for status inquiries is 703-306-3329.

Michael P. Mooney
Examiner
Art Unit 2877

Frank G. Font
Supervisory Patent Examiner
Art Unit 2877

FGF/mpm
7/27/03